UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,403	03/05/2001	Thulasiraman Jeyaraman	SUN1P806/P5418	2707

20686 7590 09/29/2006

DORSEY & WHITNEY, LLP
INTELLECTUAL PROPERTY DEPARTMENT
370 SEVENTEENTH STREET
SUITE 4700
DENVER, CO 80202-5647

EXAMINER	
DUONG, THOMAS	
ART UNIT	**PAPER NUMBER**
2145	

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/800,403	JEYARAMAN ET AL.	
	Examiner	Art Unit	
	Thomas Duong	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-2, 4-6, 25-26, 28, 35-36, 38-40, and 51-53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2, 4-6, 25-26, 28, 35-36, 38-40, and 51-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the applicants Amendment filed on July 20, 2006. Applicant amended *claims 4-5 and 53*. *Claims 1-2, 4-6, 25-26, 28, 35-36, 38-40, and 51-53* are presented for further consideration and examination.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: *"enterprise computing environment"*.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. *Claims 35-36, 38-40, and 53* are rejected under *35 USC § 101* because the claims are not limited to tangible embodiments since *claim 40* is clear intrinsic evidence that the medium in the earlier claims and in *claim 53* is intended to cover signals, per se. As claimed, a *"data signal embodied in a carrier wave"* is not a physical article or object required to establish a statutory category of invention as a machine, manufacture, process or composition of matter. As such, the claims are not limited to statutory subject matter and are, therefore, non-statutory. Hence, in order to overcome this *35 USC §*

101 rejection, the above claims need to be amended to include only the physical computer media and not a transmission media or other intangible or non-functional media.

5. *Claims 25-26, 28, and 52* are rejected under *35 USC § 101* because the claims are not limited to tangible embodiments since they do not claim physical articles or objects as part of the claims to establish a statutory category as a machine or manufacture, and they are clearly not to a process or composition of matter. As claimed, an *"environment"* fails to fall within a statutory category of invention. As such, the above claims are not limited to statutory subject matter and are, therefore, non-statutory. Hence, in order to overcome this *35 USC § 101* rejection, the above claims need to be amended to include only the physical computer media and not a transmission media or other intangible or non-functional media.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. *Claims 51-53* are rejected under 35 U.S.C. 102(b) as being anticipated by Raz (US005504899A).

8. With regard to *claims 51-53*, Raz discloses,

- *receiving a request to start the transaction;* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"a processor 145 in a distributed transaction processing system that uses the preferred atomic commitment protocol to process global transactions. The processor also processes local transactions. The local transactions, for example, are issued by a local user 146 such as an application program executed by the processor. Global transactions issued by the local user are coordinated by the transaction manager 147, the functions as the atomic commitment coordinator for these global transactions"* (Raz, col.21, lines 53-61). In addition, according to Raz, *"in any case, the transaction scheduler receives the transaction request and puts the transaction request into an entry of the transaction list"* (Raz, col.22, lines 24-26). Hence, Raz teaches of receiving requests to start a transaction and storing the transaction request.

- *storing information which indicates that the request to start the transaction was received;* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"in any case, the transaction scheduler receives the transaction request and puts the transaction request into an entry of the transaction list"* (Raz, col.22, lines 24-26). Hence, Raz teaches of receiving requests to start a transaction and storing the transaction request.

- *accessing a first resource manager associated with the transaction;* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"each transaction should be assumed to be a global, but in this case any optimization of the local concurrency control for local transaction is lost. When an optimistic local concurrency control is used, for example, knowledge*

that a transaction is local can be used any time before the transaction is decided" (Raz, col.22, lines 14-19). In addition, Raz discloses, *"the transaction scheduler eventually transfer execution to the transaction, and the transaction is executed until either it becomes inhibited or it becomes ready"* (Raz, col.22, lines 26-29). Hence, Raz teaches of executing the transaction as a local transaction immediately without deciding if it should be a local or a global transaction.

- *initiating the transaction as a local transaction on the first resource manager without knowledge of whether the transaction is more appropriate to be a local transaction or a global transaction; and* (Raz, col.21, line 52 – col.23, line 6) Raz discloses, *"a processor 145 in a distributed transaction processing system that uses the preferred atomic commitment protocol to process global transactions. [However, the] processor also processes local transactions. The local transactions, for example, are issued by a local user 146 such as an application program executed by the processor. Global transactions issued by the local user are coordinated by the transaction manager 147, the functions as the atomic commitment coordinator for the global transactions"* (Raz, col.21, lines 53-61). Hence, Raz teaches of a processor in a distributed transaction processing system that processes both local and global transactions issued by the local user. Because of this, *"the processor 145 should know whether a transaction is global or local, depending on the source of the transaction"* (Raz, col.21, lines 61-63) and that *"the information should be made available to the local scheduler as early as possible for use by the local concurrency control mechanism"* (Raz, col.21, line 65 – col.22, line 14). Hence, Raz teaches of a need for the local scheduler of the processor to know if an issued transaction is

either a local transaction or a global transaction as soon as possible so as to maintain the local concurrency control. Raz discloses, *"otherwise, each transaction should be assumed to be global, but in this case any optimization of the local concurrency control for the local transaction is lost"* (Raz, col.22, lines 14-16). Hence, Raz teaches that if there is no regard to the local concurrency control, *"then each transaction should be assumed to be global"* (Raz, col.22, line 14-15). However, *"if this [is the] case [then] any optimization of the local concurrency control for local transaction is lost"* (Raz, col.22, line 15-16). Therefore, in fact, Raz is teaching away from assuming that each transaction is a global transaction in order to optimize the local concurrency control for local transactions. Raz goes on to disclose, *"when an optimistic local concurrency control is used, for example, knowledge that a transaction is local can be used at any time before the transaction is decided"* (Raz, col.22, lines 16-19). Hence, Raz teaches that when optimization of the local concurrency control is used, then the *"knowledge that [the] transaction is local can be used at any time before the transaction is decided"* (Raz, col.22, lines 18-19). Thus, in effect, Raz teaches of processing the transaction as a local transaction without the need to determine whether the transaction should be a local transaction or a global transaction. In addition, Raz discloses, *"for some applications, some transaction types are a-prior known to be local, and hence this information could be used to identify local transactions in systems which do not explicitly identify the source of each transaction"* (Raz, col.22, lines 19-23). Hence, Raz teaches that in systems that do not identify the source of each transaction, meaning that the transactions are not known to be local transactions or global transactions; but, because these

transactions are known to be local transactions coming from certain applications, there is no need to determine whether these transactions are local transactions or global transactions. And, therefore, these certain types of known transactions can be processed as local transactions immediately upon their arrival.

- *completing the transaction,* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"the transaction scheduler eventually transfer execution to the transaction, and the transaction is executed until either it becomes inhibited or it becomes ready"* (Raz, col.22, lines 26-29). Hence, Raz teaches of executing the transaction as a local transaction immediately without deciding if it should be a local or a global transaction until it becomes inhibited or it becomes ready.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. *Claims 1-2, 4-6, 25-26, 28, 35-36, and 38-40* are rejected under 35 U.S.C. 103(a) as being unpatentable over Raz (US005504899A) and in view of McKeehan et al. (US006061708A).

11. With regard to *claims 1, 25, and 35*, Raz discloses,

- *receiving a request to start the transaction;* (Raz, col.21, line 52 – col.23, line 6)

Raz discloses, *"a processor 145 in a distributed transaction processing system that uses the preferred atomic commitment protocol to process global transactions. The processor also processes local transactions. The local transactions, for example, are issued by a local user 146 such as an application program executed by the processor. Global transactions issued by the local user are coordinated by the transaction manager 147, the functions as the atomic commitment coordinator for these global transactions"* (Raz, col.21, lines 53-61). In addition, according to Raz, *"in any case, the transaction scheduler receives the transaction request and puts the transaction request into an entry of the transaction list"* (Raz, col.22, lines 24-26). Hence, Raz teaches of receiving requests to start a transaction and storing the transaction request.

- *storing information which indicates that the request to start the transaction was received;* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"in any case, the transaction scheduler receives the transaction request and puts the transaction request into an entry of the transaction list"* (Raz, col.22, lines 24-26). Hence, Raz teaches of receiving requests to start a transaction and storing the transaction request.

- *accessing a first resource manager associated with the transaction;* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"each transaction should be assumed to be a global, but in this case any optimization of the local concurrency control for local transaction is lost. When an optimistic local concurrency control is used, for example, knowledge that a transaction is local can be used any time before the transaction is decided"* (Raz, col.22, lines 14-19). In addition, Raz discloses, *"the transaction scheduler*

eventually transfer execution to the transaction, and the transaction is executed until either it becomes inhibited or it becomes ready" (Raz, col.22, lines 26-29). Hence, Raz teaches of executing the transaction as a local transaction immediately without deciding if it should be a local or a global transaction.

- *initiating the transaction as a local transaction on the first resource manager without first determine whether the transaction is appropriate to be a local transaction; and* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"a processor 145 in a distributed transaction processing system that uses the preferred atomic commitment protocol to process global transactions. [However, the] processor also processes local transactions. The local transactions, for example, are issued by a local user 146 such as an application program executed by the processor. Global transactions issued by the local user are coordinated by the transaction manager 147, the functions as the atomic commitment coordinator for the global transactions"* (Raz, col.21, lines 53-61). Hence, Raz teaches of a processor in a distributed transaction processing system that processes both local and global transactions issued by the local user. Because of this, *"the processor 145 should know whether a transaction is global or local, depending on the source of the transaction"* (Raz, col.21, lines 61-63) and that *"the information should be made available to the local scheduler as early as possible for use by the local concurrency control mechanism"* (Raz, col.21, line 65 – col.22, line 14). Hence, Raz teaches of a need for the local scheduler of the processor to know if an issued transaction is either a local transaction or a global transaction as soon as possible so as to maintain the local concurrency control. Raz discloses, *"otherwise, each*

transaction should be assumed to be global, but in this case any optimization of the local concurrency control for the local transaction is lost" (Raz, col.22, lines 14-16). Hence, Raz teaches that if there is no regard to the local concurrency control, *"then each transaction should be assumed to be global"* (Raz, col.22, line 14-15). However, *"if this [is the] case [then] any optimization of the local concurrency control for local transaction is lost"* (Raz, col.22, line 15-16). Therefore, in fact, Raz is teaching away from assuming that each transaction is a global transaction in order to optimize the local concurrency control for local transactions. Raz goes on to disclose, *"when an optimistic local concurrency control is used, for example, knowledge that a transaction is local can be used at any time before the transaction is decided"* (Raz, col.22, lines 16-19). Hence, Raz teaches that when optimization of the local concurrency control is used, then the *"knowledge that [the] transaction is local can be used at any time before the transaction is decided"* (Raz, col.22, lines 18-19). Thus, in effect, Raz teaches of processing the transaction as a local transaction without the need to determine whether the transaction should be a local transaction or a global transaction. In addition, Raz discloses, *"for some applications, some transaction types are a-prior known to be local, and hence this information could be used to identify local transactions in systems which do not explicitly identify the source of each transaction"* (Raz, col.22, lines 19-23). Hence, Raz teaches that in systems that do not identify the source of each transaction, meaning that the transactions are not known to be local transactions or global transactions; but, because these transactions are known to be local transactions coming from certain applications, there is no need to determine whether these transactions are local transactions

or global transactions. And, therefore, these certain types of known transactions can be processed as local transactions immediately upon their arrival.

- *completing the transaction,* (Raz, col.21, line 52 – col.23, line 6)

  Raz discloses, *"the transaction scheduler eventually transfer execution to the transaction, and the transaction is executed until either it becomes inhibited or it becomes ready"* (Raz, col.22, lines 26-29). Hence, Raz teaches of executing the transaction as a local transaction immediately without deciding if it should be a local or a global transaction until it becomes inhibited or it becomes ready.

- *wherein the method further includes:*

  - *initiating the transaction as a global transaction after initiating the transaction as the local transaction; and* (Raz, col.21, line 52 – col.23, line 6)

    Raz discloses, *"the transaction scheduler may commit a ready local transaction. To insure global synchronization is a distributed transaction processing system, however, a ready global transaction is committed only after a handshake with the coordinator 147"* (Raz, col.22, lines 36-40). In addition, Raz discloses, *"this handshake insures that a global transaction is not committed unless all of the processors that are processing assigned portions of the global transaction are also ready to commit their assigned portions of the global transaction. Therefore, when the state of a global transaction changes from the 'active' to the 'ready' state, a 'prepared' signal is transmitted to the coordinator 147"* (Raz, col.22, lines 4046). Hence, Raz teaches of executing the transaction as a local transaction immediately without deciding if it should be a local or a global transaction until it becomes inhibited or becomes ready using a 2-phase commit optimization procedure.

However, Raz does not explicitly disclose,

- *completing both the local transaction and the global transaction substantially atomically using a last resource 2-phase commit optimization.*

McKeehan teaches,

- *completing both the local transaction and the global transaction substantially atomically using a last resource 2-phase commit optimization.* (McKeehan, col.1, line 45 – col.2, line 32; col.3, lines 23-62; col.4, line 37 – col.7, line 9) McKeehan discloses, *"when an application accesses multiple resources such as files, databases, and message queues, the transaction manager co-ordinates the updates to these resources, ensuring that either all updates are performed together or none are performed. It uses a method known as the two-phase commit procedure to achieve this. The two-phase commit procedure includes a voting phase in which resource manager indicates that his resource is prepared to commit, and a commit phase indicating that the data has been changed or updated. If the voting phase indicates a problem the data is not committed and the transaction does not occur"* (McKeehan, col.1, lines 53-64). Hence, McKeehan teaches of a distributed computing environment capable of supporting the two-phase commit procedure.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teachings of McKeehan with the teachings of Raz to *"[optimize] of the local concurrency control for local transaction"* (Raz, col.22, lines 15-16). According to Raz, *"when an optimistic local concurrency control is used, for example, knowledge that a transaction is local can be used at any time before the transaction is decided"* (Raz, col.22, lines 16-19).

12. With regard to *claims 2, 26, and 36*, Raz and McKeehan disclose,

- *wherein completing the transaction includes using a local transaction mechanism of the first resource manager.* (Raz, col.21, line 52 – col.23, line 6; McKeehan, col.1, line 45 – col.2, line 32; col.3, lines 23-62; col.4, line 37 – col.7, line 9)

13. With regard to *claims 4 and 38*, Raz and McKeehan disclose,

- *wherein completing both the local transaction and the global transaction substantially atomically includes using the local transaction as a last resource 2-phase commit optimization.* (Raz, col.21, line 52 – col.23, line 6; McKeehan, col.1, line 45 – col.2, line 32; col.3, lines 23-62; col.4, line 37 – col.7, line 9)

14. With regard to *claims 5 and 39*, Raz and McKeehan disclose,

- *further including lazily determining whether to initiate the global transaction.* (Raz, col.21, line 52 – col.23, line 6; McKeehan, col.1, line 45 – col.2, line 32; col.3, lines 23-62; col.4, line 37 – col.7, line 9)

15. With regard to *claims 6, 28 and 40*, Raz and McKeehan disclose,

- *wherein the enterprise environment is a Java 2 Enterprise Environment and receiving the request to start the transaction includes receiving the request from a component associated with the Java 2 Enterprise Environment.* (McKeehan, col.6, line 59 – col.7, line 9; col.9, line 55 – col.10, line 6; col.11, lines 47-67)

Response to Arguments

16. Applicant's arguments with respect to *claims 1, 25, 35, and 51-53* have been considered but they are not persuasive.

17. With regard to *claims 51-53*, the Applicants point out that:

- *It is respectfully submitted that Raz does not disclose at least the feature of "initiating the transaction as a local transaction on the first resource manager without knowledge of whether the transaction is more appropriate to be a local transaction or a global transaction."*

However, the Examiner finds that the Applicants' arguments are not persuasive because Raz discloses, *"a processor 145 in a distributed transaction processing system that uses the preferred atomic commitment protocol to process global transactions. [However, the] processor also processes local transactions. The local transactions, for example, are issued by a local user 146 such as an application program executed by the processor. Global transactions issued by the local user are coordinated by the transaction manager 147, the functions as the atomic commitment coordinator for the global transactions"* (Raz, col.21, lines 53-61). Hence, Raz teaches of a processor in a distributed transaction processing system that processes both local and global transactions issued by the local user. Because of this, *"the processor 145 should know whether a transaction is global or local, depending on the source of the transaction"* (Raz, col.21, lines 61-63) and that *"the information should be made available to the local scheduler as early as possible for use by the local concurrency control mechanism"* (Raz, col.21, line 65 – col.22, line 14). Hence, Raz teaches of a need for the local scheduler of the processor to know if an issued transaction is either a local transaction or a global transaction as soon as

possible so as to maintain the local concurrency control. Raz discloses, *"otherwise, each transaction should be assumed to be global, but in this case any optimization of the local concurrency control for the local transaction is lost"* (Raz, col.22, lines 14-16). Hence, Raz teaches that if there is no regard to the local concurrency control, *"then each transaction should be assumed to be global"* (Raz, col.22, line 14-15). However, *"if this [is the] case [then] any optimization of the local concurrency control for local transaction is lost"* (Raz, col.22, line 15-16). Therefore, in fact, Raz is teaching away from assuming that each transaction is a global transaction in order to optimize the local concurrency control for local transactions. Raz goes on to disclose, *"when an optimistic local concurrency control is used, for example, knowledge that a transaction is local can be used at any time before the transaction is decided"* (Raz, col.22, lines 16-19). Hence, Raz teaches that when optimization of the local concurrency control is used, then the *"knowledge that [the] transaction is local can be used at any time before the transaction is decided"* (Raz, col.22, lines 18-19). Thus, in effect, Raz teaches of processing the transaction as a local transaction without the need to determine whether the transaction should be a local transaction or a global transaction.

In addition, Raz discloses, *"for some applications, some transaction types are a-prior known to be local, and hence this information could be used to identify local transactions in systems which do not explicitly identify the source of each transaction"* (Raz, col.22, lines 19-23). Hence, Raz teaches that in systems that do not identify the source of each transaction, meaning that the transactions are not known to be local transactions or global transactions; but, because these transactions are known to be local transactions coming from certain applications,

there is no need to determine whether these transactions are local transactions or global transactions. And, therefore, these certain types of known transactions can be processed as local transactions immediately upon their arrival.

18. With regard to *claims 1, 25, and 35*, the Applicants point out that:

- *As discussed in great detail above, it is respectfully submitted that Raz does not, in fact, disclose (or even suggest) such a feature.*

However, the Examiner finds that the Applicants' arguments are not persuasive because Raz discloses, *"a processor 145 in a distributed transaction processing system that uses the preferred atomic commitment protocol to process global transactions. [However, the] processor also processes local transactions. The local transactions, for example, are issued by a local user 146 such as an application program executed by the processor. Global transactions issued by the local user are coordinated by the transaction manager 147, the functions as the atomic commitment coordinator for the global transactions"* (Raz, col.21, lines 53-61). Hence, Raz teaches of a processor in a distributed transaction processing system that processes both local and global transactions issued by the local user. Because of this, *"the processor 145 should know whether a transaction is global or local, depending on the source of the transaction"* (Raz, col.21, lines 61-63) and that *"the information should be made available to the local scheduler as early as possible for use by the local concurrency control mechanism"* (Raz, col.21, line 65 – col.22, line 14). Hence, Raz teaches of a need for the local scheduler of the processor to know if an issued transaction is either a local transaction or a global transaction as soon as possible so as to maintain the local concurrency control. Raz discloses, *"otherwise,*

each transaction should be assumed to be global, but in this case any optimization of the local concurrency control for the local transaction is lost" (Raz, col.22, lines 14-16). Hence, Raz teaches that if there is no regard to the local concurrency control, *"then each transaction should be assumed to be global"* (Raz, col.22, line 14-15). However, *"if this [is the] case [then] any optimization of the local concurrency control for local transaction is lost"* (Raz, col.22, line 15-16). Therefore, in fact, Raz is teaching away from assuming that each transaction is a global transaction in order to optimize the local concurrency control for local transactions. Raz goes on to disclose, *"when an optimistic local concurrency control is used, for example, knowledge that a transaction is local can be used at any time before the transaction is decided"* (Raz, col.22, lines 16-19). Hence, Raz teaches that when optimization of the local concurrency control is used, then the *"knowledge that [the] transaction is local can be used at any time before the transaction is decided"* (Raz, col.22, lines 18-19). Thus, in effect, Raz teaches of processing the transaction as a local transaction without the need to determine whether the transaction should be a local transaction or a global transaction.

In addition, Raz discloses, *"for some applications, some transaction types are a-prior known to be local, and hence this information could be used to identify local transactions in systems which do not explicitly identify the source of each transaction"* (Raz, col.22, lines 19-23). Hence, Raz teaches that in systems that do not identify the source of each transaction, meaning that the transactions are not known to be local transactions or global transactions; but, because these transactions are known to be local transactions coming from certain applications, there is no need to determine whether these transactions are local transactions or

global transactions. And, therefore, these certain types of known transactions can be processed as local transactions immediately upon their arrival.

Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Duong whose telephone number is 571/272-3911. The examiner can normally be reached on M-F 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason D. Cardone can be reached on 571/272-3933. The fax phone numbers for the organization where this application or proceeding is assigned are 571/273-8300 for regular communications and 571/273-8300 for After Final communications.

Thomas Duong (AU2145)

September 25, 2006

Jason D. Cardone

Supervisory PE (AU2145)